

# ***Livestock***

The role

**Assets**

**Market access/income**

**Human nutrition and health**

Productivity constraints

**Feed**

**Disease**

Removing disease constraints

**Improved breeds**

**Vaccines**

**Vector control**

# **ILRI, KARI and Partners: biotechnology**

**ECF vaccine**

**CBPP vaccine**

**Diagnostics for pathogens**

**Biodiversity and environmental monitoring**

**Conservation and utilisation of animal and plant  
genetic resources**

**Dairy safety**

# ***The opportunities***

**Technology that permits resolution of problems previously considered intractable**

**Technology that is common across the biological disciplines**

**Unique biology**

## ***And the constraints***

**Long-term and appropriate funding**

**Laboratory (including containment) facilities**

**Human capital**

**Enabling legislative environment**

# ***Biosciences East Africa***

## **The Concept**

**Shared state-of-the-art research facilities**  
backed up by **first class training** of young  
scientists and development of an  
**enabling environment**

**Long term vision** of new **indigenous**  
**discovery** using the best of the **new**  
**sciences** and **targeted** at priority  
biological problems

# ***NEPAD***

## ***Science and Technology***

**NEPAD has identified two goals for science and technology:**

- 1 To harness and apply science and technology to fight poverty, improve health status, achieve environmental sustainability and industrialisation**
- 2 To contribute to global science and innovation**

# Biosciences East Africa

To provide a **focal point** for the African scientific community and support the activities of regional, national and international agencies and **address priority biological problems**

To achieve **excellence in science** by bringing together a **critical mass** of scientists in **state-of-the-art research facilities**

To enable African scientists to undertake **cutting edge research**

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# Biosciences East Africa

To **increase access** to state-of-the-art research facilities and **reduce** their **cost** to individual projects and institutions

To provide **advice** on **biosafety** and **intellectual property management**

To act as a **knowledge sharing** and **management** facility with respect to the biosciences

To **attract investment** from public and private sectors



# **Biosciences East Africa**

**The principles:**

**Discovery**

**Excellence in science**

**Independent governance**

**Research targeted at African priorities**

**Open to all African scientists and  
institutions**

**Capacity building at all levels**

# What are the pillars that support Biosciences Africa?

**Biosciences East Africa**

```
graph TD; A([Biosciences East Africa]) --- B([Human capital]); A --- C([Technology]); A --- D([Enabling environment]);
```

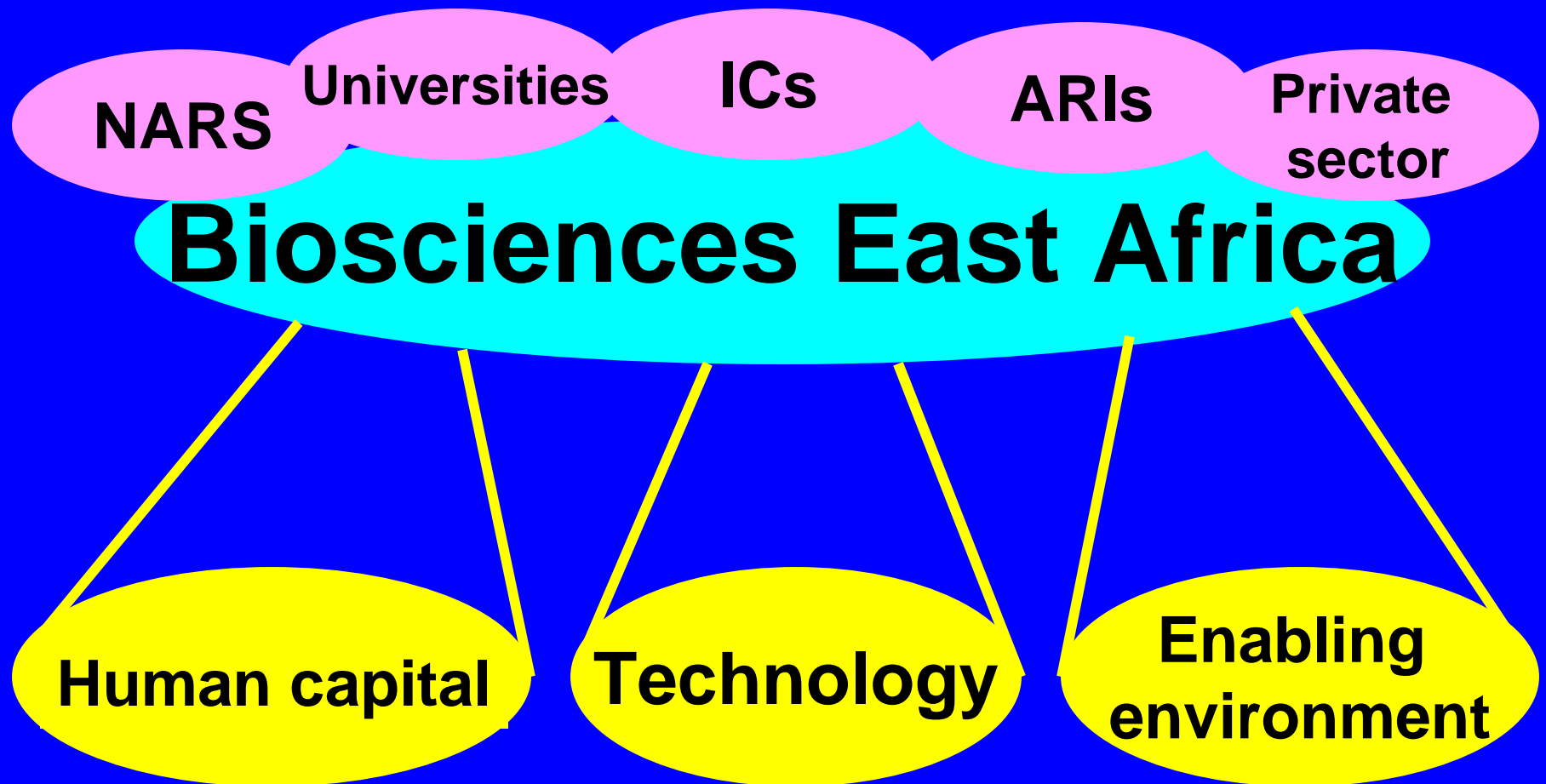
The diagram illustrates the pillars supporting Biosciences East Africa. A central light blue oval at the top contains the text 'Biosciences East Africa'. Three yellow lines connect this central oval to three yellow ovals below it. The left yellow oval contains the text 'Human capital', the middle yellow oval contains 'Technology', and the right yellow oval contains 'Enabling environment'.

**Human capital**

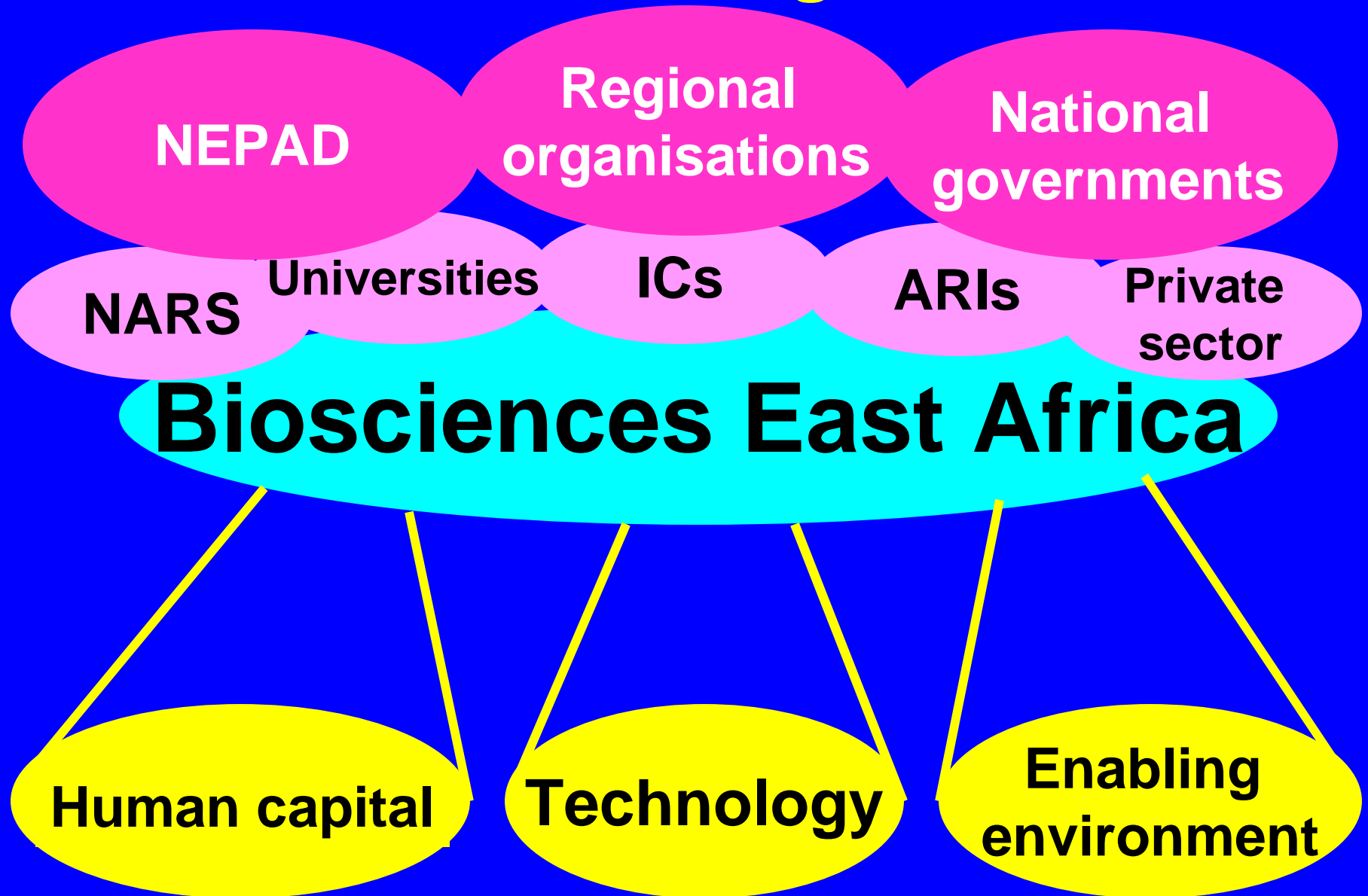
**Technology**

**Enabling  
environment**

# Who are the partners?



# Who sets the agenda?



# **Some needs**

**Stress and disease resistant crops**

**New vaccines for animal and zoonotic infections**

**New diagnostics for diseases**

**New diagnostics for quality control of food processing**

**New diagnostics for environmental monitoring**

**Novel method of control of arthropod vectors of animal and human diseases, crop and storage pests**

# **Biosciences East Africa**

**Possible *Hubs* of *African Biosciences* include:**

**Animal health**

**Bioethics and biosafety**

**Bioinformatics**

**Biometrics and statistics**

**Environmental health**

**Epidemiology**

**Intellectual property management**

**Plant biotechnology**

# **Biosciences East Africa**

## **Human capital**

**MSc and PhD training**

**Junior and senior fellowships for  
established researchers**

**Visiting scholars from ARI**

# **Biosciences East Africa**

## **Getting started**

**Further consultation**

**Establishing an advisory panel**

**Identification of a limited number of  
priority research projects**



**Running title**

***Biosciences East Africa***

**Building Africa's Human and Physical  
Scientific Capacity**

**Targeting Research for Agriculture and  
Human Health**

# **Biosciences East Africa**

**The technologies**

**Genomics**

**Functional genomics**

**Proteomics**

**Bioinformatics**